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JUL 0 6 2004
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ATTORNEY DOCKET NO. 22118.0002U2

METHOD AND SYSTEM FOR DETECTING AND/OR PREDICTING CEREBRAL DISORDERS

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a Continuation-in-part of U.S. Utility Application No. 10/353,849 filed January 29, 2003. In addition, this application claims priority from U.S. Provisional Application No. 60/445,495 filed February 6, 2003. These applications are hereby incorporated by reference.

BACKGROUND

The present invention is directed to a method and system for evaluating biological or physical data. More particularly, the present invention is directed to a system and method for evaluating biological or physical data for detecting and/or predicting cerebral disorders.

The recording of electrophysiological potentials has been available to the field of medicine since the invention of the string galvanometer. Since the 1930's, electrophysiology has been useful in diagnosing cardiac injury and cerebral epilepsy.

The state-of-the-art in modern medicine shows that analysis of R-R intervals observed in the electrocardiogram or of spikes seen in the electroencephalogram can predict future clinical outcomes, such as sudden cardiac death or epileptic seizures. Such analyses and predictions are statistically significant when used to discriminate outcomes between large groups of patients who either do or do not manifest the predicted outcome, but known analytic methods are not very accurate when used for individual patients. This general failure of known analytic measures is attributed to the large numbers of false predictions; i.e., the measures have low statistical sensitivity and specificity in their predictions.

It is usually known that something "pathological" is going on in the biological system under study, but currently available analytic methods are not sensitive and specific enough to permit utility in the individual patient.

The inaccuracy problems prevalent in the art are due to current analytic measures (1) being stochastic (i.e., based on random variation in the data), (2) requiring